

MAN -143-003-B GPRS 4-20mA Transient logger Part number RDL976/x/x Series

Version 1.1



Warning: This manual contains important safety and operating information. Please read, understand and follow the instructions in the manual.

Contents

INTRODUCTION
UNPACKING
INSTALLING THE SOFTWARE4
INSTALLATION AND SITE HARDWARE DIAGNOSTICS TOOL (IDT)5
READING THE LOGGER5
CONFIGURING THE LOGGER7
DATA COMMUNICATIONS CONFIRMATION – GPRS TEST12
TAKING A READING FROM THE LOGGER AND HARDWARE TESTS 14
SETTING UP THE CHANNELS IN DATAGATE FOR A PRESSURE TRANSIENT LOGGER17
SETTING UP RADWIN SOFTWARE19
DOWNLOADING DATA FROM DATAGATE TO RADWIN

Introduction

Thank you for choosing an HWM data logger(s), we trust it will provide you with many years of service.

The individual configuration of your logger(s) may differ slightly from the detailed descriptions that follow, but any additional setup information that you need, can easily be obtained from our customer support team.

Unpacking

As you unpack your new logger, please confirm that you have the following parts required to install the equipment. If there are any omissions, please contact our sales team to rectify or supply the missing parts.

- Pressure Transient logger
- Communications cable
- HWM IDTV Software (also available at <u>www.hwm-water.com</u>)

Please dispose of your waste packaging responsibly.

Before proceeding to site for physical installation, please take the time to configure your logger in an office environment. Most settings can be configured before visiting site and this will save time at the point of install, especially if the weather is bad.

You will need to have:-

an

A PC with Windows 7/8 installed (IDT also supports Windows XP & Vista) A description and reference number for the installation site:

The reference number is split into a Zone and Location format to allow for grouping of individual "Locations" into larger regions or "Zones". The format of the number is configured during the initial installation of the software but essentially is a 7 character code, e.g. AB123CD

Installing the software

- 1. Insert the CD-ROM supplied into your CD drive.
 - (If your PC does not have a CD drive, then either copy the files from the CD-ROM onto a memory stick, or download and run the installation file from the HWM website at <u>www.hwm-water.com</u>)

NOTE: If you use proprietary archiving software, such as WinZip or 7zip, please ensure that you extract the files to a temporary folder using the automatic extraction buttons that maintain the original folder structure.

- 2. Ensure you have system administration rights for your computer, ask your IT department if you are unsure.
- 3. Locate the two files "setup IDT.msi" (in the IDT folder), which installs the program and "setup driver.bat" (in the Driver folder) which installs the necessary USB drivers for the logger.
- 4. Double click the "setup IDT.msi" file and click <<Next>> when you see the screen below

al es	1111
Welcome to the IDT Setup Wizard	5
The entitle of gade yes though the rings reasond is result (17 a	r yeur composite
NAREHERS: This compare asymptotic parameter by copying have an Uncontracted displaying a distribution of the parameter and any portion or contract penalties, and will be proceeded to the memory estimate	d international tooles rad 5, opportual or street cord conditio and at the two
Lece .	and marked

- 5. Follow the on screen installation instructions to complete the install of the IDT.
- 6. To install the USB drivers double click the "setup driver.bat" file identified in step 3. If you see the unzipping message below, click "Extract all" to extract the files to a folder first, then try again.

Comp	ressed (zij	oped) Fo	iders Warn	ring:
<u>^</u>	This applie tiles in this For the app that you fe	ation may d folder. dication to r t extract all	ependionioth un propedy, if Nac	er compressed is recommended
			P.e	(Treast)

7. Follow the on screen instructions and the drivers will install automatically. Should the automatic installation fail, please check with your system administrator that you have sufficient rights to install the driver or try installing the drivers manually.

You may be required to update Microsoft .Net; the install file is included with the IDT setup files for your convenience.



Important: As the logger is not powered from the PC directly, to preserve battery, the logger will automatically disconnect from the PC and shutdown if there has been no activity for **10mins**. If you try to communicate with the logger after this time, a message "Connect/Re-connect logger!" will appear. Simply unplug the USB plug from your computer, wait for 2 seconds and then reconnect. This will wake up the logger again.

(i)



4. The IDT will now download the current settings from the logger.

At this point the IDT will check to see if there is a more up-to-date version of the logger firmware available on your PC, if so, you will see the message "Update Available". Click <<Yes>> to update the logger, the process will take approximately 2 minutes, however the logger will be restarted so you may wish to transfer any logged data first, in which case click <<No>>.

The IDT checks the firmware version each time you read it.



5. Once all the settings have been loaded you will see this message, Click <<OK>> to start configuring your logger.

	×
Logger Read Success	
ОК	

detailed explanation follows in 2.):	:-
i) Logger Details including logger ID; SIM card phone number current logger time and current logger status (Recording or Waiting to Record or Stopped) Note – 'Waiting to record' means the recording will not start until the next sample period boundary	HWM IDT (Installer mode) V1.00.34 – × File Tools Options Help + Setup Data Collection Hardware Tests Calibration Pressure 1 + Unilog on COM6 Logger Type FW-138-002 V2.31 (Recording) ID COMLGPT Serial No 0000200 Tel No +447860769600 logger time 24/10/2014 12:23:10
ii) Logger start time, data capture interval and sample interval	Logging Parameters Start Time 23/10/2014 Log Interval 24 Hours 00:01 00 €
 iii) Logger channel configuration including 4mA and 20mA configuration settings 	Logging Channels Type Mode Offset or 4mA Scale or 20mA Ch1 4-20mA Ave 0.000 20000.000 Ch2 4-20mA Min 0.000 20000.000 Ch3 4-20mA Max 0.000 20000.000
iv) Transient capture settings	Surge logging Sample Frequency 100 samples/second Transient Mode Record data at specific times Recording triggered on alarm event Continuous recording to SD and triggered on alarm Amount of data stored before each recording 5 seconds Duration of each recording 30 seconds Erase previous recordings
v) Service provider settings for SIM Card	APN Use GPRS test to choose APN settings Let me choose APN settings
vi) Call settings for sending data to the host -	Time(s) Data is Sent Address Type Mode Time hh.mm Off ✓ UDP ✓ ✓ 01:00 🛫



- 2. Now you can enter the configuration you require for each section :
 - Logger enter the site ID that you wish for the logger, e.g. Postal/ZIP code of up to 7 alpha-numeric characters and the telephone number associated with the SIM card. If you ordered a SIM with the logger, this will have been programmed already for you, otherwise enter the number from your service provider in international format (e.g. +44...)
 - ii. Logging Parameters Accept the default start time or enter your own. Default start time is in the past so the logger will begin recording immediately. You can delay this start time by selecting one from the calendar or enter the time directly from your number keypad. Set your log interval if required – 15 mins is default. Sample interval for pressure channels is 30 secs by default – you cannot set a pressure channel below this but it can be greater than this if required.



Spot / State = not required for Pressure Transient logging

Example - for a pressure transient analysis you may want to set the primary channel to 'Avg' so that the channel 1 graph will show average pressure readings over the sample period; but you might then set Channel 2 to Max so that the graph for Channel 2 will show the maximum readings during the sample period. This will narrow down the data that needs to be examined for the transient situations. Other channels can be set to record other phenomenen



iv. Transient settings -

Select the transient sample setting you require from the drop down

Select the Transient mode option You require –

 Record data at specific times allows the transient event to be recorded for a selectable duration

Sample Frequency	100 samples/second v				
Transient Mode					
Record data at spe	cific times				
Recording triggered on alarm event					
Continuous recording to SD and triggered on alarm					
Amount of data stored before each recording					
	5 seconds ∨				
Duration of each record	ing 30 seconds 🗸				
Erase previous rec	cordings				

- Recording triggered on alarm event allows the transient to be recorded for selectable durations before and after the event (you will need to set the alarm conditions- see section viii)
- Continuous recording to SD and triggered on alarm used if the logger is expected to be in use for a considerable time - average recordings will be made to the SD card and transient data triggered by the alarm will also be stored

Select the amount of data stored before each Transient and the duration of the transient recording as required.

 APN – If you have ordered a data pack from HWM you can leave this setting alone (as below) as your logger will have been preconfigured by HWM.

APN

If you have ordered your data service & SIM card, then you will need to separately configure your

Use GPRS test to choose APN settings
 Use the following settings.

service. HWM recommends that you allow the GPRS test utility to search for these settings automatically, however if you wish to enter them manually, click the button beside "Use the following settings"

You can now enter your	APN Use GPRS Use the foll	test to choose APN settings owing settings.
Alternatively select your network from the drop down list of presets	Presets Address User Password	mobile.o2.co.uk mobileweb password

vi. **Time(s)** Data sent – Here you specify the Call Out requirement for the logger. There are 2 modes available, SMS and UDP. SMS is a one way unacknowledged data transfer service using the common text messaging service. UDP is a true 2 way confirmed data transfer process via the internet over a GPRS connection. Both have advantages, however HWM recommends UDP wherever possible as this offers the most secure method of data transfer.

Switch on the Call out by selecting "On" in the Address selector, then choose 'UDP' or 'SMS' from the Type selector. See below for Mode settings

Address	Туре		Mode	Freq hh:	mm
On 🔻	UDP	-	Freq 🔻	00:15	-

Fall back 1

÷

Time (a) Data is Cant

Call Addresses – These will usually have been entered at the vii. factory and should not be adjusted, Data Destination however if you have your own data inbound.hwmonline.com Address server, then you can enter either the 23024 Port telephone number for your receiving modem, or the UDP address & port no SMS No. 310000202 for where the logger is to send its data.

The fall back times specified here instruct the 06:00:00 🚖 logger what to do in the event of the primary Call 16:00:00 🚔 Fall back 2 Out requirement not being met. This can be for 2 reasons:-

- a. If a connected external battery goes flat, the logger will default from the normal call out requirement to a 2 times per day routine. The times of these calls are specified by both Fall back 1 & 2.
- b. If a GPRS data call cannot be completed due to nonavailability of a GPRS service, then the logger will try to send an SMS message at the Fall back 1 time.

Now choose your Call out mode, this can be Mode Freg hh:mm either "Freq" for a call made at a regular Freq -00:05 frequency throughout the day or "Time" to specify up to 8 individual times during the day. Frea Enter either the frequency (e.g. $06:00 = every 6^{3}$ Time hours) or the time for the call in the box.

viii. **Alarms** – The Logger has a comprehensive alarm system that you can configure to send out Alarm messages when certain defined conditions are breached and for the Transient logger you will need to use Alarms to define the transient levels from which you want the data to be recorded.

When an alarm condition is triggered, a new call in	Alams		
frequency (i.e.faster) can be specified to allow the observer to gain more up-to-date data during an event.	Call frequency while in alarm	00:05	
Minimum Night Flow – not applicable for Transient logger	 MNF Window end hh:mm Flow level units 	Ub:00	v
Choose your flow units – not applicable for Transient logger	Alarms sent via SMS	12245670	
If you want SMS alarm messages to be sent, tick this box and enter	Disable alarm sending co	ming out of alar	n
Select these alarm conditions if required by ticking the boxes	Enable alarm reset at mid	night	
	Disable alarm dual freque	ncy mode	
There are 8 possible different alarm conditions that can be configured, select each one from the tabs – Note TAB 1 is for Transient alarms Set your persistence or trigger point, e.g. for transients you will want 1 out of 1 in order to pick up every transient – see note below on persistence Choose your type of alarm from the list:- Lower or Upper Limit breach - Enter the alarm threshold – Recommended to use Upper for Transients Minimum Night Flow (MNF) - not applicable for Transients Rate Of Change (ROC) not applicable for Transients Difference (Dif) between channels - not applicable for Transients Either In or Out of Band set by Upper & Lower levels	Cond 1 Cond 2 Cond 3 Cond 4 Co Transact alarm conditions Permetence 1 v out of 1 v Cover Upper Dres Dres Dres Dres Dres Dres	nd 5 Cand 6	6
Note on Persistence: When an alarm is triggered then immediately the threshold is re-crossed then sent. If there is a period when the alarm threshold i in numerous messages for the same event. By Hysteresis box, you can provide a window that a repeatedly crossed without sending repeated mess limit of 5 and a hysteresis of 1, the alarm will message will not be sent until the value drops to be 3. Final steps – By default the logger is s (Coordinated Universal Time, equivalent however you can choose either an offset logger to use your PC time.	I, if the value is sen a clear messag s borderline, this of specifying a valuation allows the thresho ssages. e.g. with a trigger at 5, but set to UTC to GMT), from this time, of	et to zero e will be an result ue in the old to be an Upper the clear Time r for the	
4. When you are happy with all the setting < <setup logger="">> button to program the log</setup>	gger.	Setup Logge	r
Data Communications Confirmation	– GPRS Tes	t	
It is important to confirm that your logger is conserver before you leave site (or to be confident, undertake a GPRS test before you leave the log	mmunicating with your office), so yo ger in the field.	the data ou should	

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1. Connect an appropriate GPRS antenna to the FME socket on the logger. The location on the logger can vary depending on the configuration of logger ordered, but the picture below illustrates a typical connection.



the following points should be checked before calling HWM support for assistance:-

Possible Problem	Solution
Network Busy due to	Retry the test after a few
excessive traffic. Commonly	minutes.
occurs around schools.	
GPRS signal not available at	The logger will call into the data
your location. Not all Cell	warehouse once per day using
masts carry GPRS traffic	an SMS message; relocate the
	logger if more frequent
	communications is required.
Network signal not strong	Relocate the antenna if possible
enough. You need a CSQ	or try alternative antenna
(reported by the GPRS test)	configurations. Ensure antennas
of at least 8 for reliable	are vertically orientated where
communications.	possible. See aerial placement
	notes section.
APN settings incorrect.	The GPRS tester knows about a
	large number of cellular networks
	and will try as many settings as
	possible and correct any error
	automatically.
	If there is still a failure, then you
	need to check with your network
	operator that you have the
	correct settings for your SIM.

If you continue to experience problems with communication, you may need to check the network coverage in your location.

Taking a reading from the logger and hardware tests

You are now ready to confirm that the logger is measuring real data from the sensors by taking an Instantaneous Value.

- 1. From the IDT menu bar, click the <<Hardware Test>> tab.
- 2. Click the <<Go>> button to start to check the operation of your installed system.

Go

3. The IDT will now display its measurements for a period of 10 minutes to allow you to diagnose any issues with cabling

	Ittery voltage	File Tools	Options Help	Tala la su la sula
	mory venage	Setup Data Col	attact Marchwere	Testa Calbration Pressure 1.* 1.*
		19.90*	C	PC8 Temperature
Inc	stantaneous 1-20ma	7.10 V		PC8 Votage
vol				
va	lue	5274.3	7	Pressure / 4-20nA
- .				
IIr	ne until test stops & Manual Stop			
bu	tton			
Op	en 10m power window button	-See at	800	10.44.0
•	'	Mod	Forme I	Cel
Mc	odem Diagnostics	- Lunit Coo	-	ATLA
	5	Load Customer F	Re Read	Logger
Fo	rce call now – will send in data if	Expand Grou	GPR:	5 Test
the	ere is any available	1		
	When you are ready to stop the test jus	t click the	<~Stor	>> button
	when you are ready to stop the test jud		~~0.01	button.
	send a text message to it to confirm that	at commur	ication	s is still OK.
5.	Pressing < <force call="">> forces the log immediately. Useful for when you wish</force>	ger to ser	ication d its da	s is still OK. ata in o a new site.
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 If you click the <<Data – Collection>> tab you will now see a set of tools for downloading data from your logger for later uploading to the data server. It can also be of assistance for diagnosing problems.

Setup Data Collection Hardware Diag	
Download size All - Adjust time to	last boundary
Download Post files Abort Em	pty postbox

- a. From the Download size selection, choose how much data you wish to retrieve, from everything the logger has stored to any unsent data since the last time the logger called in.
- b. Click <<Download>> and choose "Archive" when prompted and the data will commence downloading. If you wish to stop the process, click <<Abort>> and the download will cease.
- c. A small chart will now be displayed showing the data downloaded. By using your mouse to draw boxes in the graph area you can zoom into areas of interest. Click the small circles at the end of the drag bars to zoom out. By hovering your mouse over the points on the graph, you will see the exact value recorded.



d. If your logger is in a location where GPRS communication is not possible, you can now upload the data when you are next connected to the internet. Simply click <<Post files>> and all the data you have downloaded to your PC will be uploaded in one go. If you are downloading more than one logger in a route, all data is stored and transmitted together. If you decide that you do not wish to post the data you have downloaded, click the <<Empty postbox>> button to remove the downloaded data from your PC.

Note: Choose the other data types depending on what recordings you wish to retrieve / view.

Note: For Pressure transient logging you will only be able to view the summary graphs for the channels you have set configured. To view the pressure transient detail you would need to download the data into Radwin software

Setting up the Channels in Datagate for a Pressure Transient Logger

In your Datagate account identify the correct logger, double click on it and then select the 'edit channels' button –

IM Online Culturer Lingue	HMH Online Customer Legar	View kogger - H	White DataGate	-						-	.0	9.3
+ @ dringen mobilicore it;	web togget here than 2008					2 Britege		2 1	(後)	4 A	D	1
act Victord 🛢 Getting Started												
HWM	DataGate							Content Low Access Issue Logost	: hwest : Super : logout	a01 admin		
Loggers	View logger											
Loggera	Serial number (0200			LHBLIGE.		6	1007			10	
Summory	Ortagate number 3	28596		- 64	Heating		0	tion	odder	-	2	
Quiet loggers	Proble number	441890769600			00CAOD 99.0	Sec. 60, 06	1	THE WAR	ir chian	ide:	1	
My Loggars	Site name	4-20niA Transsort			rd date 25-Feb-20	014 22:39	1.1	206.0000	a comune	ies.		
Lost loggers	Site id -	4-20mtA Townstants		Rattary :	orealities 7.0v							
Create a new lugger	Determinated 3	26-Feb-JDIJ 16:58	:29	Segual	strangth 17							
stend to loggers	Tertwork (02			Verson 2.22							
Logger Types Logger types New logger type	Owned by 4	AndyEarp		19	tape Hw-sues	640						
Channel units Channel units New channel unit	Credts Charmels	Accounts A	larm responses	Incoming data	Incoming bast	Outpoing massag	ĸ					
Accounts	Incoming GPRS mess	wges .	Inca	ming SMS messa	upon.	Outgoin	ig messages			i.		
My Account.	Evaluat reading	true (toggie)	1.000	Designt gradita	true (toggle)	0,000,00	Dasket credito	true (topple)	(
Ourge my assessed	Credita	191057		Credite	100		Ordes	100				
All eccounts	Tests and	8943		Credit used	0		Credit Long	0				
All accounts	Waiting for credits	0		Waiting for chedita	0	-943	iting for mades	0				
COULD DEM BUCKLEY	Last message	12-5ep-2014 13	47	Last message		Said	mailings service					
Messamo hunc	Mart alter + dave	3		Must after x days	3							
Incoming SMG	Add income	ng IPRS credita		Add incom	ing SMS credits		Add out	going credits	-			
bicoming GPRS Incoming Alarms	1000	Add GPRS create		1000	Add SMS credits	0	1000	Add cred	ts.			

For each of the channels that you have configured in the logger enter the correct details for in the fields as follows –

States to mebilicane system and	ng probannels him Progger da 2	1596		7 (C)	- Gault	P 12 12 4	* 9	
eet Vaibid 👹 Getting Stated								
Summary	Channel 1			Channel 2		-		
All Loggers Oxiet loggers	Number	í i	1	Number	2			
My Loggers	Name	Pressure Avg		PARTIN	Pressure Min			
Upload loggers	Offset	-3516.24		Offeet	-3516.24			
Send to loggers	Channel type	Pressure (4-20) (psi)	-	Channel type	Pressure (4-20) (pel)			
coger types	Calibration Multiplier	8.79062		Calibration Molti	Channel na	mo		
Channel units	Meter read value			Meter read value	Charmerna	ne		
New channel unit	Mater read date	3 v 9 v 2014 v	0 + 0 +	Meter read data				
Accounts	Analoguie low value			Analogue low va	Offset value	(value fr	om I	
My Account My Account Change my password	Analogue high value			avialogue tigh v	software)	,		
All accounts All accounts Create new account	Channel 3							
Logs	Number	3			Channel tvp	e - Press	ure	
Messaging logs	Name	Pressure Has			(4.20) noi			
Incoming GPRS	Offset	-3516-24			(4-20) psi			
Outgoing messages	Channel type	Pressure (a-20) (pst)	¥					
Lost messages summery	Calibration Multipler	8.79062						
Extended API Other logs	Meter read value							
FTF log AP1 log	Meter read date	10 - 9 - 2014 -	0 0				12 Suptainting Filiday	ii.
						1		-

Once the data is coming in you will be able to view the graph on HWMOnline.

The data will be displayed as additional traces on the graph for a Sample Frequency setting of Sample Interval. For higher Sample Frequency rates the primary trace on HWMOnline will display a diamond symbol to indicate the point where a transient occurred.



Click the diamond to provide a close up view of the transient



For more advanced manipulation and viewing of transient data you can download the data from Datagate into Radwin. See the following section on how to install and setup Radwin.

Setting up Radwin software

Two things must be done -

1. Set up Radwin to receive data from Datagate

First set up Autocall as follows -In Setup > System configuration > Autocall ports Select a free port (highlight it and then click Edit selected item)

Advanced	Autocal I enable it	Ports - Select the comm po and specify its function if	Its to be used for Autocall Downloads. Select the required port processing of SMS Messages is required, but no SMS Modern	N N
Manual Cal S View	Database Syste	m Startup Autocal Po	Hand Autocal Options Autocal OMS Alama/EncrExporting	- 22
distant and the second	Enable Port	Delaut Boud Rate	Connection Type:	Ì
Data Generator	& COM1	9600	SMS Modem	
Alum Docemen	COM2	300	Process SMS Messages from FTP Site	
Alam Reveiuer	COM3	300	Modern	
Remote Autocal	COM4	309	DataGate	
Remote Alam R	-S COMS	303	Modere	
	COM6	9600	Modern	
	COM7	300	Moders	
	COM9	300	Modern	
	COM9	300	Modern	
	COM10	2400	Modern	
	-COM11	19200	Direct Logger (RS232)	
	COLUMN T	PORTON	U-due	
			Edt Selected Item	
				-

In 'Edit Selected Item' Screen then select 'Datagate' from the connection Type drop down.

ruble Port	Connection Type:		Deaphartfire.	
COM4	DataGate	•	3 300	-
Constant Faile Constant Faile Frankfille Fail	Duttation - Detacail Duttation - Wetringhouse Main Frane Modem (ABB AquaMaster S) Paknet Modem (ABB AquaMaster S) Direct Logger (FS222) (ABB AquaMaster S) Indum Satellite Modem	× ×		
aGate Configure	lon			
ataGate Address	http://datagate.mebili.com/datagate			
Isenane	Paterood			

Click on Enable port (tick the box)

Enter your Datagate account details in Username and Password. (These should have been supplied to you)

Press 'OK'

System Configuration	Autocall Ad	vanced		
Configure Advanced Radvin All	Autocal Pr enable it a	ats - Select the comm port nd specify its function. If p	ts to be used for Autooal Downloads: Select th rocecoing of SMS Messages is required, but no	e required part to SMS Modem is
SR View	Database System	n Startup Autocal Port	* Autocal Options Autocal OM5 Alam/E	nor Exporting
TX Data Generator	Enable Post	Delault Baud Rate	Connection Type:	
Export Alum Program	COM2	300	Process SMS Messages from FTP Site	
Alam Receiver	C100	300	Moder	
😹 Remote Autoca	COM4	300	DataGate	
🚮 Remote Alam R	- COMO	900	Hoden	
	SCIM5	300	Modern	
	COM8	300	Modern	
	COM9	300	Modern	
	COM10	2400	Modern	
	-0 COM11	19200	Direct Logger (RS232)	

2. Set up the loggers in the Database (if they are not already there).

In Set up > Options > Item configuration you should now see your logger database as below.

C User (index je Docamente	$ \times _{\mathrm{Tri}}$	E . *
Cliviers/andrew_brDocuments/Documents/Existence Service/Vacanite Detection/Dec 10 B 2 Zones/Locations H &Of (H &Of (H &Of (H &Of () Additional Test H &O00 () H &O000 () H &O00		
	CK	Cancel

If your logger details are not here then you need to enter your logger details as follows.

You may need to add a new Zone (or you can add your logger to an existing Zone.)

To enter a new zone –

Click on the 'Hammer & Sickle' icon (see screen shot above) Then select 'Create New Zone' to reveal this screen shot

Briter to the son	te required identity and name for the Zone. If a already exists it will get updated.
Zone Identity:	014
Name:	WER TEST

Enter your Zone I/D and Name and then 'Save'.

You should now see the new Zone in the list as below.



Highlight the new Zone and select the 'Hammer and Sickle' Icon again This time select 'Create New Location'

You should now see this screen (below)

Configure:	Location - Specify the location identity and name. Enter names for each of the logger channels.
Reconstruction Reconstruction Reconstruction Reconstruction Reconstruction Reconstruction Reconstruction Reconstruction	Location logger Statistics Transducer Unit/Levels Meter Autocall Memo Auto Database E
	Channel Names
	Channel Name & 01 & 02 & 03 & 04

First select the Location Tab - enter your location description (numerical and alphanumeric descriptions)

Then select the 'Logger' tab -

	Location Configu	rationOS_22 : Radwin All
Configure: Basic Radwin All Wiew Call	Logger - Select the logger communicate with the logg Location Logger Statistics Tra Logger Type: <u>Communicate Other L</u> Date Manufactured: Last Battery Change:	type and baud rate. Select the connection type (how the computer will r), and enter telephone numbers if required. The logger manufacture insducer Unit/Levels Meter Autocall Memo Auto Database E Baud: 11/01/1970 Serial: 41351 11/01/1970 Last Known Logger Configuration
	Connection Connection Type: G5M Data Number: SMS Voice Number:	GPRS +61409658277
		Print Save Cancel

Fill in the logger details as accurately as possible.

Logger type from the drop down – Note : For Pressure Transient Logger the type is 'Other Logger'

Baud rate is automatically set

Serial number can be entered – it is found on the logger label **Connection type** – select GPRS from the drop down

SMS Voice number – be sure to enter the correct logger phone number in international format (+44 drop the zero- OR for international numbers ensure it is exactly the same as the number in Datagate) DOUBLE CHECK THIS NUMBER IS CORRECT

	Location Configuration	onOS_23 : Radv	win All
Configure: Basic Basic Radwin All Manual Call View Autocall Bata Generator Export Alarm Programm Alarm Receiver Remote Autocall Remote Alarm Re	Transducer - Select the transducer channel in order Location Logger Statistics Transducer Channel: ▲ Channel: Data Factors 1.000000 Calibration: 1.000000 Image: Apply Logger Calibration Configuration Configuration Transducer Type Sensor Type: Transducer Name: Full Scale Deflection (20mA) Value: Data Type:	cer type for each chann to calibrate the downloo cer Unit/Levels Meter nannel 01 Offset: MA Pressure 1600.000000 All Data Values	el. Transducers Must be configured for aded data. Select 'Configure' or double er Autocall Memo Auto Database E

Select 4-20mA for the transducer type then select Configure -

4-20mA Transducer	×
Select the units Sensor type. This defines the type of units that can be applied to the data. Select a stored transducer from the list, or select user	\$
Sensor Type: Pressure	
Transducer	
Select: User Defined Transducer Remove	
Enter/Edit Transducer	-1
Name:	
Full Scale Deflection (20mA) Value:	
20000.000 PSI	
Zero Scale Deflection (4mA) Value:	
0.000000 PSI	
Data Type: All Data Values	
Add to Select Transducer List Bands	
Export OK Cancel	

Select PSI and enter the 4mA and 20mA values (as above)

Note when you select 'OK' to accept this the FSD 20mA value appears different in the below screen –it is OK – note the Cal and offset values are correct.

Remember now to repeat this process for the other channels you have set up by selecting each channel from the drop down.

	Location Configuration _OS_23 : Radwin All
Configure: Basic Radwin All Manual Call View Autocall Data Generator Export Alarm Programm Alarm Receiver Remote Autocall Remote Alarm Re	Transducer - Select the transducer type for each channel. Transducers Must be configured for each recording channel in order to calibrate the downloaded data. Select 'Configure' or double Location Logger Statistics Transducer Unit/Levels Meter Autocall Memo Auto Database E · · Channel: Data Factors Calibration: 8.790819 Offset: -3516.327637 Calibration: Rapply Logger Calibration Configuration Transducer Type · · · · Pressure Transducer Name: Full Scale Deflection (20mA) Value: 14065.310547 Data Type: All Data Values
	Print Save Cancel

Once the channel configuration is completed select 'Save'

Update Existing Location					
Select OK To Update the Existing Location :OS_22					
OK Cancel					

Select 'OK' to complete the logger configuration in Radwin software

Repeat this process for each of your loggers.

Downloading data from Datagate to Radwin

Because of the size of the data to be downloaded from Datagate we would advise you to run Autocall all the time on your PC so that Radwin is constantly downloading and updating the data in its database

Start Autocall

This will process all the available data messages from Datagate relating to your loggers.

Fie Optiam	Radwin Autocall 94.67.1 - Computer 1 (CNMy Do Configuration Start Help	ocuments\Customer Si	srvices/ECM/ECM (DATA Jan14) - D
38 08	Ø		
&Cororel	SHS Maden		Autocall
ŧ	Unable To Open Conev4 - Port does not even or USB has been unplugged.		
Part10	DataBare (http://datagate.mobili.com/data		Topes (Search Result)
Dalagale	Proceeding FTP2: 654 447568124753	Abort	Introduction
&Cond4	SHS To DataSate		Getting Stated Continuing Autor all Come Posts
2	Unable To Open Cover14 - Post down not axist at USB that been unplugged		Configuring Logges for Autocell Download Scheduled Calling
			Introduction Autocal is the automatic data download package of Radiog For Windows. It may be configured to use up to 32 comm parts, providing parallel download capacitity of Radicem data loggers. It supports Direct, PUTN Modern, GSM Nodern, SMS Modern, and Planet Modern connection types
		I	Getting Started

Once the data is constantly downloading and updating the Radwin database you can view it as follows -

From the View screen select the 'Open Data file' icon -



Find the correct logger in the data base and click on the '+' sign to reveal the data files –

🙆 Data File 🏼 Data Time Peri	od Function Sets		
C: \radwin\SmartLog			1. 2
M1811 07/10/2014	(06/10/2014-09:50:33) :	a de la deserve de la deser	
- 1812 07/10/2014	{06/10/2014-09:51:06} :		
- M1813 07/10/2014	{06/10/2014-14:23:11} :		
- M1814 07/10/2014	(06/10/2014-14:23:44) :		
- M1815 07/10/2014	(06/10/2014-14:24:17) :		
M1816 07/10/2014	(06/10/2014-14:25:33) :		
- M1817 07/10/2014	(06/10/2014-14:26:06) :		
- 1818 07/10/2014	(06/10/2014-14:26:39) :		
- M1819 07/10/2014	{06/10/2014-14:27:45} :		
- M1820 07/10/2014	{06/10/2014-14:28:51} :		
M1821 07/10/2014	{06/10/2014-14:29:24} :		
- M1822 07/10/2014	(06/10/2014-14:29:58) :		
- M1823 07/10/2014	{06/10/2014-14:31:22} :		
- 10 M1824 07/10/2014	(06/10/2014-14:31:55) :		
- M1825 07/10/2014	(06/10/2014-14:32:28) :		
- M1826 07/10/2014	(06/10/2014-14:36:31) :		
M1827 07/10/2014	{06/10/2014-14:37:37} :		
- M1828 07/10/2014	(06/10/2014-14:38:10) :		
- M1829 07/10/2014	{06/10/2014-14:38:45} :		
M1830 07/10/2014	(06/10/2014-14:40:36) :		
- M1831 07/10/2014	(06/10/2014-14:41:09) :		
- 🔂 M1832 07/10/2014	{06/10/2014-14:41:42} :		
M1833 07/10/2014	(06/10/2014-14:42:15) :		
- 10 M1834 07/10/2014	(06/10/2014-14:42:48) :		
- 1835 07/10/2014	(06/10/2014-14:43:54) :		
A0001 07/10/2014	(30/09/2014-02/10/2014) :		
A0002 07/10/2014	(02/10/2014-07/10/2014) :		
B SSST :			

'A' Files are normal logging (non transient) archive files which are appended at every Autocall download; whereas 'M' Files are the transient files, as they are separate events that do not get appended to.



Note - 'A' Files cover a period between two dates, whereas Transient 'M' files are denoted by the date and time allowing easy access to the main transient events that you might want to investigate in detail.

Double click on the data file with the time and date of the transient you want to look at and select 'OK' at the following screen -

		Lowd Data File		
Select a	i deta cherriel, ir i ifi ehould be upda	é data d'arrada, to ver ad otheranar neu data	s. Salect Truble a added to Fw a	Live Updets' if a elected data 🖕
(deritty				
Dove	_06	Olets Hal		
Location	Aller a			
102				
Channel:	Al Channels			Advanced >
F Load Stored 7	iext			
Crubie Live Lt	niste		OK	Caricel

This will launch the Radwin View Graph which can be manipulated to view the pressure transients in detail using the normal View features and controls -



Note- If you configured your logger as per the suggestions in this guide you will have three graph lines – Average, Max and Min values. The Max and Min graphs can be expanded to allow detailed investigation of the poasitve and negative transients.

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